

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-41. Canceled

42. (Currently Amended) A system for facilitating the mixing of a fluid, the system comprising:

at least one container containing a polymer array and a fluid; **wherein the container defines a chamber, the chamber including a pair of closely spaced-apart faces that are separated by walls to define a narrow interior, wherein one of the faces defines a planar surface on which the polymer array is disposed;** and

a holding device comprising a body with a rotational axis, a pair of end members extending from the rotational axis, one or more walls extending between the end members parallel to the rotational axis, and at least one coupling member constructed and arranged to couple the container to at least one of the walls, such that when the container is coupled to the coupling member the polymer array is substantially perpendicular to the rotational axis **and the container is spaced apart from the rotational axis, and at least one coupling element operably attached to the body in alignment with the rotational axis and adapted to couple the body to a rotation mechanism that rotates the body around the rotational axis.**

43. Canceled

44. (Currently Amended) A system as in claim ~~43~~42, wherein the walls of the chamber are set at angles sufficient to agitate the fluid when rotated.

45. (Original) A system as in claim 42, wherein the container is only partially filled with the fluid to form a bubble therein.

46. (Original) A system as in claim 45, wherein the fluid contains at least one target molecule and the polymer array contains complementary probe sequences, wherein

agitation of the fluid by the bubble increases the hybridization rate between the target molecule and the probe sequences.

47. (Original) A system as in claim 42, wherein the end members are perpendicular to the walls.

48. (Original) A system as in claim 42, wherein the coupling member comprises a pair of rails fixedly attached to one of the walls to form a slot for receiving the container.

49. (Original) A system as in claim 48, wherein the rails are perpendicular to the wall.

50. (Original) A system as in claim 42, further comprising an oven, wherein the holding device is rotatably disposed in the oven.

51-64. Canceled

65. (Currently Amended) A device as in claim ~~44~~ 42, wherein the coupling member comprises an elongate slot formed within the ~~side~~ wall.

REMARKS/ARGUMENTS

Claims 41-50, 64 and 65 are pending in this application and are finally rejected. Claims 41, 51, 52 and 64 are objected to by the examiner. Claims 41 and 64 have been canceled. The limitation of claim 43 has been added to claim 42 and claim 43 has been canceled. Claim 65 has been amended to depend from claim 42.

Claim Objections

The objections to claims 41 and 64 are obviated by the cancellation of these claims. Claim 52 has been renumbered as claim 65 by the examiner, thereby removing the objection to this claim.

Rejections under 35 U.S.C. §102

Claims 41-50, 64 and 65 are finally rejected as being anticipated by Griner et al. U.S. Pat No. 5,266,272 ("Griner"). Griner teaches holders for specimen trays that are affixed in a vertical position to a carousel that rotates around a vertical axis extending through the center of the carousel. This allows the holders to travel from one station to another arranged around the perimeter of the carousel. The examiner argues that the device taught by Griner "is capable of being used in the manner discussed in claim 41, including being rotated about an axis from which the end members extend." However, each holder is taught by Griner to be immovably attached to the carousel with tie-down bolts (e.g. see item 62 in Fig. 9 and col. 5, lines 51-55). Griner does not contemplate rotation of the holder about an axis from which the end members extend and therefore does not teach or suggest any structure that couples the body of the holder to a rotation mechanism that rotates the body around its rotational axis. Claim 42 has been amended to include at least one coupling element operably attached to the body in alignment with the rotational axis and adapted to couple the body to a rotation mechanism that rotates the body around the rotational axis. Support for this element is found in the description, e.g. page 3, lines 30-33. Since Griner neither teaches nor suggests this structural element of amended claims 42, 44-50 and 65, these claims are not anticipated by Griner. It is therefore respectfully requested that the rejection of these claims over Griner be withdrawn.

The rejection of claims 41 and 64 as being anticipated by Pakeriasamy and Nicholson are obviated by the cancellation of these claims.

Claims 42-47 are rejected as being anticipated by Wells. Wells teaches a churn for milk or cream that comprises a rotatable rectangular frame in which are disposed jars having lids to contain the liquid in the jars. As shown in Figs. 1, 2 and 7, the rotational axis of the holder passes substantially through the center of the jars (containers) being held in the frame. Claim 42 has been amended to state that the container being held in the holding device of the present invention is spaced apart from the rotational axis of the holder body. Support for this limitation is found in the description, for example, at page 3, lines 10-13. In this way, the containers are held in a position in which they are rotated around an "off-set" rotational axis, i.e. a rotational axis that does not pass through the containers, as shown by Wells. In light of the foregoing discussion and the arguments advanced in previous responses, applicants submit that amended claim 42, as well as claims 43-47 dependent thereon, distinguish over Wells and avoid the rejection.

Claims 42 and 45-49 are rejected as being anticipated by Shumway, which teaches a device for shaking bottles in a crate. Shumway does not teach or suggest the limitation of claim 43, i.e. a container having a planar face on which a polymer array is disposed, which has been incorporated in amended claim 42. In light of this amendment, withdrawal of the rejection is respectfully requested.

Claims 42 and 45-47 are further rejected as being anticipated by Neuner et al ("Neuner"), which teaches a mixing machine for tumbling a rack carrying a plurality of volumetric glassware tubes containing chemical solutions. As discussed above, Neuner fails to teach or suggest the container of claim 43, which has been incorporated in amended claim 42. Accordingly, amended claim 42, and claims 45-49 dependent thereon, are distinguished over Neuner and avoid the rejection.

Rejection under 35 U.S.C. §103

Claim 50 is rejected as being obvious over Neuner in view of Reynolds et al ("Reynolds"). Claim 50 is dependent on claim 42 and therefore requires, in combination with an oven, the system set forth in claim 42. For the reasons discussed immediately above, Neuner

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neither teaches nor suggests the system of claim 42, alone or in combination with Reynolds. Therefore, a combination of the holding device (or system) of Neuner and the oven taught by Reynolds does not establish the obviousness of claim 50. Accordingly, applicants respectfully request withdrawal of the rejection.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. Accordingly, an advisory action indicating the entrance of this amendment, and the issuance of a formal Notice of Allowance at an early date, are respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,



Mart C. Matthews
Reg. No. 26,201

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: 303-571-4000
Fax: 415-576-0300

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